



# INTERSTATE MAX YELLOW LINE



*MAX Yellow Line light rail service connects the Expo Center, N/NE Portland, Portland City Center and Portland State University. Most southbound trains continue through Portland City Center as MAX Orange Line trains to Milwaukie.*

## Background

The Interstate MAX Yellow Line is a 5.8-mile extension of MAX light rail connecting Downtown Portland, the Rose Quarter, North Portland neighborhoods, Portland International Raceway and the Expo Center. The project was originally part of a longer extension, the South-North light rail project, which would have stretched from the southern suburb of Milwaukie through Portland and across the Columbia River into Vancouver, Washington. Clark County, Washington, voters rejected financing their segment of that line in 1995. Three years later, the Portland region rejected a property tax increase for a revised Oregon-only project, although it was supported in Multnomah County and in the City of Portland.

## Support revives light rail for North Portland

Portland business and neighborhood leaders asked TriMet and Metro to find a way to build the “north” segment but address several issues. They wanted a less expensive project, no home or business displacements, and no increase in property taxes. The Interstate MAX light rail project met those criteria.

Nearly 74 percent of the \$350 million project cost was federally funded. This unusually high level of federal participation recognized the region’s investment in the Airport MAX Red Line, which was constructed without federal funds. This brought the federal share for Interstate MAX to \$257.5 million. Metro regional transportation, City of Portland and TriMet funds made up the \$92.5 million balance.

## Design and construction highlights

### Community-focused design

A design priority was to transform Interstate Avenue into a pedestrian-friendly, multi-modal urban street. Interstate MAX serves long-established, diverse neighborhoods with a strong sense of community. Station placement, design and art elements reflect the adjacent communities. The project also enhances the streetscape by tripling the number of trees along Interstate Avenue. Since the project is constructed at grade within the existing street right-of-way, it integrates safety, lighting and aesthetics into the alignment design.

## Rose Quarter junction

In 2009, the MAX Yellow Line moved from the east-west downtown alignment that it had shared with the Red and Blue lines since 2004 to the new north-south alignment also used by the Green Line. At the east end of the Steel Bridge, Interstate MAX separates from this shared alignment and enters the median of the Yellow Line, which it follows for the next 4.5 miles, climbing a six percent grade between Albina and Overlook Park stations.

## Moving Paul Bunyan

In the Kenton neighborhood, a 37-foot, six-ton statue of Paul Bunyan served as a community icon for more than 40 years—and stood in the middle of the planned alignment. A community event was held to move the statue 59.2 feet to a new plaza. Across from the statue, bright blue, hoof-shaped seating sculptures invoke Paul's legendary companion, Babe the Blue Ox.

## Community art celebrates cultural diversity

Guided by an art advisory committee comprised of citizens and art professionals who live or work near the Interstate corridor, TriMet's Public Art Program captured the diverse cultural and historic character of the 10 station areas. It also provided direction for the 18 artists and writers who developed more than 50 art elements for the line, and inspiration for an oral history project entitled *Intersections: TriMet Interstate MAX Light Rail Community History Project*.

## Construction innovations

### A model in earth-friendly construction

Interstate MAX used innovative, green construction practices previously not widely applied to light rail construction. The focus on green construction saved \$3 million in construction costs. Examples include:

- Using 6,000 recycled plastic railroad ties in embedded trackway
- Employing recycled plastic bollards and chains to discourage trespassing



*Brian Borrello's Silicon Forest, at the Interstate/Rose Quarter MAX Station, presents a metaphor for displacement and change.*

- Creating art elements for stormwater management
- Recycling asphalt and concrete as base materials for roadways, trackway and sidewalks
- Expanding wetlands and tripling the number of trees along the alignment
- Reusing excavated soils in sewer trenches and planters, saving on hauling and disposal
- Recycling excavated old trolley rails
- Designing system support buildings to shed rainwater into the ground rather than into the storm sewer system

## Success with DBEs and workforce diversity

From the beginning, TriMet wanted the community in North and Northeast Portland to benefit economically from the Interstate MAX project as much as possible. It also committed to using contractors and a workforce on the project that reflected the diversity of the community. In the process, TriMet created a national model for Disadvantaged Business Enterprise (DBE) involvement.

Through innovative contracting—including breaking up large contracts into smaller ones and rotating DBE subcontractors within a scope of work—as well as

technical and financial assistance to DBEs, TriMet worked together with its prime contractors to achieve some remarkable results:

- 19 percent (\$36 million) of the project's total contracting dollars went to local DBEs
- \$8.1 million in contracts went to DBE subcontractors in North and Northeast Portland

## **Business support program**

Many of the businesses along Interstate Avenue are small, owner-operated enterprises. To minimize construction impacts, TriMet maintained access to businesses along the avenue and worked in 3- to 4-block segments to complete work as quickly as possible.

To further offset possible construction impacts, partner agencies created an advertising campaign to draw in business. The broad-based campaign included advertisements, direct mail, promotions, financial assistance, technical workshops for the businesses and a "Lunch Bus" that brought 14,000 people to Interstate restaurants. Over 50 new businesses had opened on Interstate Avenue by December 2004, eight months after the line opened.

## **Ahead of schedule and under budget**

The Interstate MAX project opened four months early on May 1, 2004, and millions under budget. Much of the time and money savings came from these initiatives:

- Value engineering
- Utilizing the construction management/general contractor delivery method
- Bringing the construction contractor into the design phase early
- Using innovative construction practices and materials

## **Technical highlights**

### **Safety**

Due to its location in an high pedestrian traffic environment, a post and chain barrier was installed

between the tracks for the length of the project. This system, previously used on the Eastside MAX line, prevents passengers from walking out behind a train into the path of an oncoming one. The use of recycled plastic bollards (posts) and chain eliminated the need for an expensive grounding system, which had been required with the steel chains and bollards used on TriMet's previous rail projects. Zee crossings were also used to protect pedestrians, and new countdown crossing signals were introduced—the first use of these in Portland.

### **Vanport Bridge**

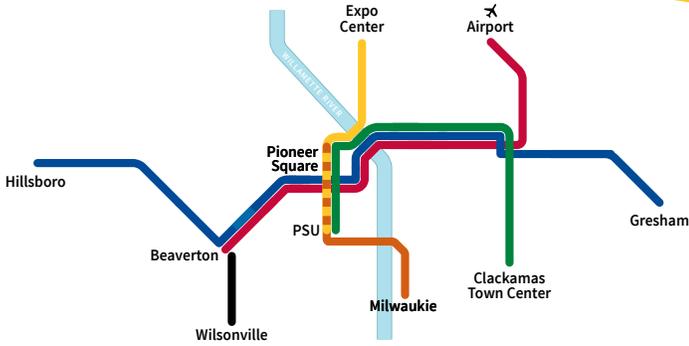
North of Kenton, MAX Yellow Line is carried on an elevated structure. The 4,000-foot-long Vanport Bridge carries light rail over several industrial properties, a railroad, slough, floodplain and highways. This long structure was named in memory of the city of Vanport. Formerly located at this site, the city was washed away by floodwaters in 1948, killing at least 15 people and leaving 18,000 residents homeless.

### **Vehicles**

TriMet purchased 17 new low-floor rail cars sporting TriMet's new logo and colors, along with 10 more for ridership growth.

## **Transit-oriented development**

The Yellow Line was intended to stimulate reinvestment in the commercial corridor and residential areas surrounding the MAX stations. Notable additions on Interstate Avenue include New Seasons grocery store, Trillium School, Providence Medical Clinic, a renovated Fred Meyer and an expansion of Kaiser Permanente's Interstate Medical Office, in addition to many new small businesses. The Overlook, a 30-unit condominium project located at N Shaver Street, completed in 2007, was the first new mixed-use project in a Yellow Line station area. In 2009, the Patton Park Apartments opened, offering 53 affordable housing units. New housing and commercial options increase the ease of a transit-oriented lifestyle.



## Snapshots

### Timeline

- 1999** Preliminary design and environmental studies began
- 2000–2001** Project approval and construction
- 2002** Utility relocation completed
- Winter 2003** Track/street/sidewalk construction completed
- Summer 2003** Art pieces installed at all 10 stations
- 2003–2004** Signals, overhead power, shelters, testing
- May 1, 2004** Opened four months ahead of schedule

### Annual Ridership



### Facilities

- Length** 5.8 miles
- Stations** 10

**Surface Park & Rides** 2 with 300 spaces each

**Maintenance facility** Expansion of the Ruby Junction Maintenance Facility in Gresham to accommodate the new trains

### Frequency

Approximately every 15 minutes during peak hours; approximately every 35 minutes during early morning and nighttime service.

### Travel times

**Expo Center to Downtown Portland** 25 minutes

### Bus connections

Includes 12 connections with TriMet bus lines along the Interstate alignment and numerous bus lines downtown.

### Funding

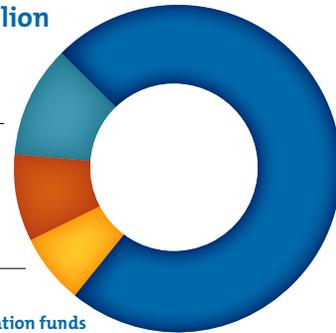
**Total: \$350 million**

\$38.5 million  
TriMet

\$30 million  
City of Portland

\$24 million  
Regional transportation funds

\$257.5 million  
Federal



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